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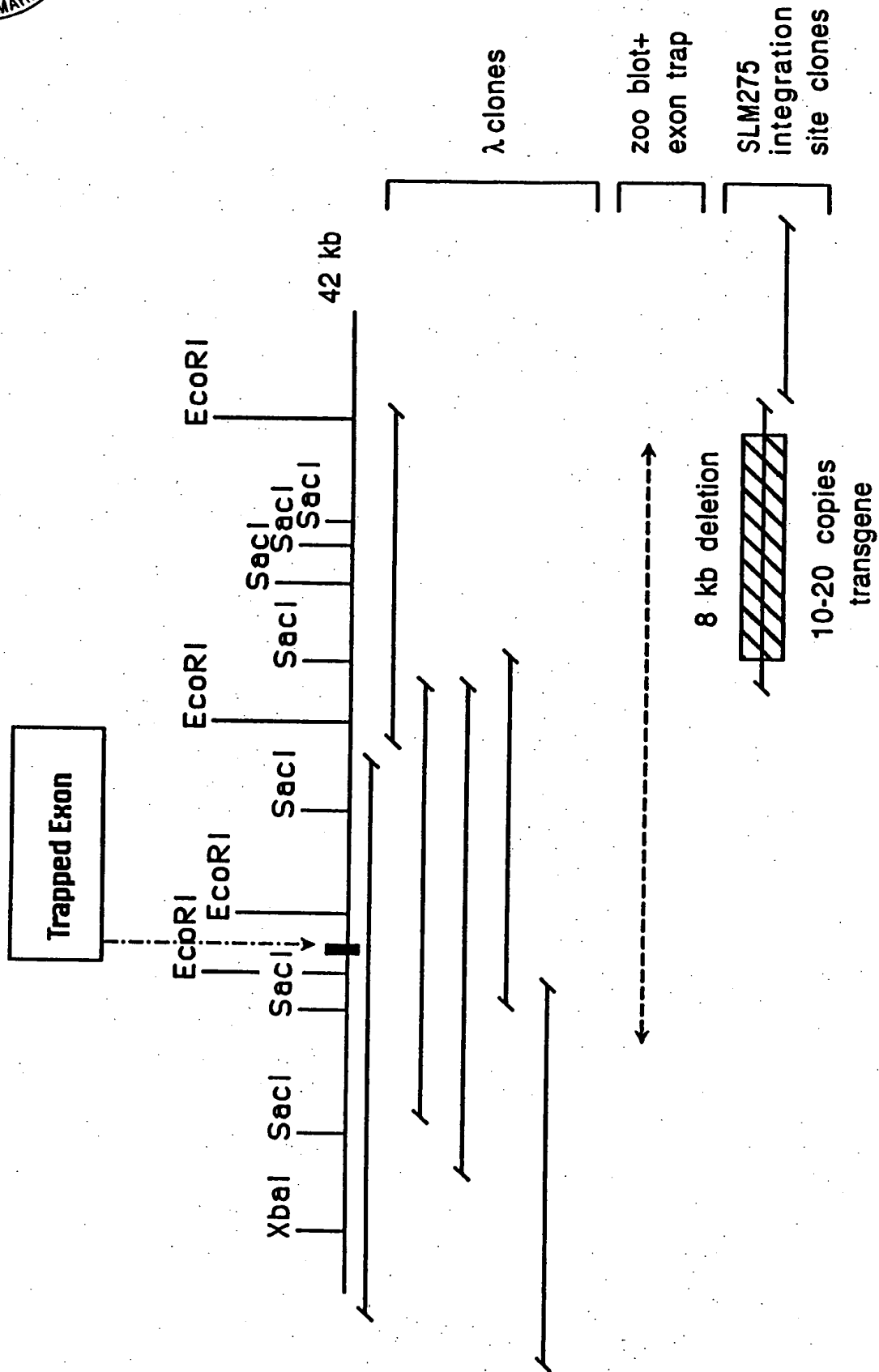


FIG.1



SEQ ID NO:1 m-del1	DL	LLVPTKVTG	IITQG--AKD	FGDVLVGSY	KLAY	NDGEH	WMVHQDEKQR	cont.
SEQ ID NO:2 h-MFG	DL	GSSKEVTG	IITQG--ARN	FGSVQFVASY	KVAY	SDSAN	WTEYQDPRTG	cont.
SEQ ID NO:3 h-FV	DL	LKIKKITA	IITQG--CKS	LSSEMYVKS	TIHY	SEQVE	WKPRLKSSM	cont.
SEQ ID NO:4 m-FV111	DL	QTMKVTG	IITQG--VKS	LFTSMFVKEF	LISS	QDGH	WT--QILYNG	cont.
SEQ ID NO:5 X-A5b1	DL	ENLRFVSG	IGTQGAISKE	TKKKYFVKSY	KVDI	SNGED	WI-TLKDGN	cont.
SEQ ID NO:6 X-A5b2	DL	AEEKIVRG	VIIQG--GKH	KENKVFMRKF	KIGY	SNNGTE	WEMIMDSSKN	cont.
SEQ ID NO:7 dis-1	G	CEVPRTFMC	VALQC--RG	-DADQWVTSY	KIRY	SLDNVS	WF-----EYR	cont.
SEQ ID NO:8 CONSENSUS	DL	.....VTG	IITQG--K.	.....FV.SY	KI.YS	DG..	W.....	cont.

SEQ ID NO:1 m-del1	KDKVFQGNFD	NDTHRKNNVID	PPIYARFIRI	LPL--
SEQ ID NO:2 h-MFG	SSKVFQGNLD	NNSHKKNI	FE	KPFMARYVRV
SEQ ID NO:3 h-FV	VDKIFEGNTN	TKGHVKNFFN	PPIISR	FIRV
SEQ ID NO:4 m-FV111	KVKVFQGNQD	SSTPMN	SLD	PPLLTR
SEQ ID NO:5 X-A5b1	KHLVFTGNTD	ATDVVYRPF	S	KPVITR
SEQ ID NO:6 X-A5b2	KPKTFEGNTN	YDTPELRTF-	AHIT	TGFIRI
SEQ ID NO:7 dis-1	NGAAITGVTD	RNTVVNHHFFD	TPIRAR	SAI
SEQ ID NO:8 CONSENSUS	K.KVF.GNTD	..T...N.F.	.PI...R	FIR. .P.

FIG. 2

EcoRI HpaI

GAATTCCGGT TAACTGAGCA CAAAGGGTAA TGCAGAAGTG ATATTTGATT TCCATTCTCA 60

DraI

TCCCCAGTGG CCTTGATATT TAAACTGATT CCTGCCACCA GGTCCCTGGG CCACCCTGTC 120

EspBI SphI

CCTCGCTCTC ATATTTCTGC ATGCTGCTTT GTTTGTATAT AGTGGCTCC TGGCCTCAGG 180

CTCGCTCCCC TCCAGCTCTC GCTTCATTGT TCTCCAAGTC AGAAGCCCC GCATCCGCC 240

BssHII

CGCAGCAGCG TGAGCCGTAG TCACTGCTGG CCGCTTCGCC TCGTGCGCG CACGGAAATC 300

GGGAGCCAG GAACCAAGG AGCCGCCGTC CGCCGCTGT GCCTCTGTA GACCACTCGC 360

AGCCCAGCC TCTCTCAAGC GCACCCACCT CCGCGCACCC CAGCTCAGGC GAAGCTGGAG 420

TAGGGTGAA TCACCTTTC TCTAGGGCCA CCACTCTTTT ATCGCCCTTC CCAAGATTG 480

Eco47III AatII

AGAAGCGCTG CGGGAGGAAA GACGTCTCT TGA TCTCTGA CAGGGCGGGG TTTACTGCTG 540

BssHIII PstI

TCCTGCAGGC GGCCTCGCC TACTGTGCC TCGCTACGA CCCCGACCA GCCCAGGTCA 600

BspHI

CGTCCGTGAG AAGGGATCAT GAAGCACTTG GTAGCAGCCT GGCTTTTGGT TGGACTCAGC 660

M K H L V A A W L L V G L S

CTCGGGGTGC CCCAGTTCGG CAAAGGTGAC ATTTGCAACC CGAACCCCTG TGAAAATGGT 720

L G V P Q F G K G D I C N P N P C E N G

FIG. 3A

BspMI
GGCATCTGTC TGTCAGGACT GGCTGATGAT TCCTTTTCCT GTGAGTGTCC AGAAGGCTTC 780
G I C L S G L A D D S F S C E C P E G F

BspMI
GCAGGTCCGA ACTGCTCTAG TGTGTGGAG GTTGCATCAG ATGAAGAAAA GCCTACTTCA 840
A G P N C S S V V E V A S D E E K P T S

GCAGGTCCCT GCATCCCTAA CCCATGCCAT AACGGAGGAA CCTGTGAGAT AAGCGAAGCC 900
A G P C I P N P C H N G G T C E I S E A

TATCGAGGAG ACACATTCAT AGGCTATGTT TGTAATGTC CTCGGCGATT TAATGGGATT 960
Y R G D T F I G Y V C K C P R G F N G I

CACTGTCAGC ACAATATAAA TGAATGTGAA GCTGAGCCTT GCAGAAATGG CGGAATATGT 1020
H C Q H N I N E C E A E P C R N G G I C

BsmI
ACCGACCTTG TTGCTAACTA CTCTTGTAAG TCCCCAGGAG AATTTATGGG ACGAAATTGT 1080
T D L V A N Y S C E C P G E F M G R N C

CAATATAAAT GCTCTGGCA CTTGGGAATC GAAGGTGGGA TCATATCTAA TCAGCAAATC 1140
Q Y K C S G H L G I E G G I I S N Q Q I

SacI
Ec1136II
ACAGCTTCAT CTAATCACCG AGCTCTTTT GGAATCCAGA AGTGGTATCC CTAATATGCT 1200
T A S S N H R A L F G L Q K W Y P Y Y A

NcoI
MscI
BclI
PvuII
CGACTTAATA AGAAGGGCCT TATAAATGCC TGGACAGCTG CTGAAAATGA CAGATGGCCA 1260
R L N K K G L I N A W T A A E N D R W P

TGGATTCAGA TAAATTGCA AAGAAAAATG AGAGTCACTG GTGTTATTAC CCAAGGAGCA 1320
W I Q I N L Q R K M R V T G V I T Q G A

AAAAGGATTG GAAGCCCAGA GTACATAAAA TCCTACAAAA TTGCCTACAG CAATGACGGG 1380
K R I G S P E Y I K S Y K I A Y S N D G

FIG.3B

BbsI EorI
 AAGACCTGGG CAATGTACAA AGTAAAAGGC ACCAATGAAG AGATGGTCTT TCGTGGAAT 1440
 K T W A M Y K V K G T N E E M V F R G N

 NdeI
 GTTGATAACA ACACACCATA TGCTAATTCT TTCACACCCC CAATCAAAGC TCAGTATGTA 1500
 V D N N T P Y A N S F T P P I K A Q Y V

AGACTCTACC CCCAAATTG TCGAAGGCAT TGTACTTTAA GAATGGAAC TCTTGGCTGT 1560
 R L Y P Q I C R R H C T L R M E L L G C

 SacI
 Eco136II
 GAGCTCTCAG GCTGTTGAGA ACCTTTGGGG ATGAAATCAG GGCATATACA AGACTACCAG 1620
 E L S G C S E P L G M K S G H I Q D Y Q

 BbsI
 ATCACTGCCT CCAGCGTCTT CAGAACTC AACATGGACA TGTTTACTTG GGAACCAAGG 1680
 I T A S S V F R T L N M D M F T W E P R

AAAGCCAGGC TGGACAAGCA AGGCAAAGTA AATGCCTGGA CTTCGGCCA TAACCACCAG 1740
 K A R L D K Q G K V N A W T S G H N D Q

TCACAATGGT TACAGGTGA TCTTCTTGTC CCTACTAAGG TGACAGGCAT CATTACACAA 1800
 S Q W L Q V D L L V P T K V T G I I T Q

 PmlI
 GGAGCTAAAG ATTTTGGTCA CGTGCAGTTT GTTGGGTCAT ACAAAGTAGC TTACAGCAAT 1860
 G A K D F G H V Q F V G S Y K L A Y S N

 ApaLI
 GATGGAGAAC ACTGGATGGT GCACCAGGAT GAAAAACAGA GGAAAGACAA GGTTTTTCAA 1920
 D G E H W M V H Q D E K Q R K D K V F Q

GGCAATTTTG ACAATGACAC TCACAGGAAA AATGTCATCG ACCCTCCCAT CTATGCACGA 1980
 G N F D N D T H R K N V I D P P I Y A R

FIG.3C



TTCATAAGAA TCCTTCCTTG GTCCTGGTAT GGAAGGATCA CTCGCGGTC AGAGCTGCTG 2040
F I R I L P W S W Y G R I T L R S E L L

FspI

GGCTGCGCAG AGGAGGAATG AAGTGGGGG CCGCACATCC CACAATGCTT TTCTTTATTT 2100
G C A E E E

TCCTATAAGT ATCTCCACGA AATGAACTGT GTGAAGCTGA TGGAACTGC ATTTGTTTTT 2160

HindIII

TTCAAAGTGT TCAAATTATG GTAGGCTACT GACTGTCTTT TTAGGAGTTC TAAGCTTGCC 2220

TTTTTAATAA TTTAATTGG TTCCTTTGC TCAACTCTCT TATGTAATAT CACACTGTCT 2280

EorI

GTGAGTTACT CTTCCTGTTT TCT

2303

FIG.3D



	9			18			27			36			45			54		
5'	TCT	CTT	TAG	TCA	CCA	CTC	TCG	CCC	TCT	CCA	AGA	ATT	TGT	TTA	ACA	AAG	GCG	TGA
	S	L	*	S	P	L	S	P	S	P	R	I	C	L	T	K	R	*
			63			72			81			90			99			108
	GGA	AAG	AGA	ACG	TCT	TCT	TGA	ATT	CTT	TAG	TAG	GGG	CGG	AGT	CTG	CTG	CTG	CCC
	G	K	R	T	S	S	*	I	L	*	*	G	R	S	L	L	L	P
			117			126			135			144			153			162
	TGC	GCT	GCC	ACC	TCG	GCT	ACA	CTG	CCC	TCC	GCG	ACG	ACC	CCT	GAC	CAG	CCG	GGG
	C	A	A	T	S	A	T	L	P	S	A	T	T	P	D	Q	P	G
			171			180			189			198			207			216
	TCA	CGT	CCG	GGA	GAC	GGG	ATC	ATG	AAG	CGC	TCG	GTA	GCC	GTC	TGG	CTC	TTG	GTC
	S	R	P	G	D	G	I	M	K	R	S	V	A	V	W	L	L	V
			225			234			243			252			261			270
	GGG	CTC	AGC	CTC	GGT	GTC	CCC	CAG	TTC	GGC	AAA	GGT	GAT	ATT	TGT	GAT	CCC	AAT
	G	L	S	L	G	V	P	Q	F	G	K	G	D	I	C	D	P	N
			279			288			297			306			315			324
	CCA	TGT	GAA	AAT	GGA	GGT	ATC	TGT	TTG	CCA	GGA	TTG	GCT	GTA	GGT	TCC	TTT	TCC
	P	C	E	N	G	G	I	C	L	P	G	L	A	V	G	S	F	S
			333			342			351			360			369			378
	TGT	GAG	TGT	CCA	GAT	GGC	TTC	ACA	GAC	CCC	AAC	TGT	TCT	AGT	GTT	GTG	GAG	GTT
	C	E	C	P	D	G	F	T	D	P	N	C	S	S	V	V	E	V
			387			396			405			414			423			432
	GCA	TCA	GAT	GAA	GAA	GAA	CCA	ACT	TCA	GCA	GGT	CCC	TGC	ACT	CCT	AAT	CCA	TGC
	A	S	D	E	E	E	P	T	S	A	G	P	C	T	P	N	P	C
			441			450			459			468			477			486
	CAT	AAT	GGA	GGA	ACC	TGT	GAA	ATA	AGT	GAA	GCA	TAC	CGA	GGG	GAT	ACA	TTC	ATA
	H	N	G	G	T	C	E	I	S	E	A	Y	R	G	D	T	F	I
			495			504			513			522			531			540
	GGC	TAT	GTT	TGT	AAA	TGT	CCC	CGA	GGA	TTT	AAT	GGG	ATT	CAC	TGT	CAG	CAC	AAC
	G	Y	V	C	K	C	P	R	G	F	N	G	I	H	C	Q	H	N
			549			558			567			576			585			594
	ATA	AAT	GAA	TGC	GAA	GTT	GAG	CCT	TGC	AAA	AAT	GGT	GGA	ATA	TGT	ACA	GAT	CTT
	I	N	E	C	E	V	E	P	C	K	N	G	G	I	C	T	D	L
			603			612			621			630			639			648
	GTT	GCT	AAC	TAT	TCC	TGT	GAG	TGC	CCA	GGC	GAA	TTT	ATG	GGA	AGA	AAT	TGT	CAA
	V	A	N	Y	S	C	E	C	P	G	E	F	M	G	R	N	C	Q

FIG. 4A



	657		666		675		684		693		702						
TAC	AAA	TGC	TCA	GGC	CCA	CTG	GGA	ATT	GAA	GGT	GGA	ATT	ATA	TCA	AAC	CAG	CAA
Y	K	C	S	G	P	L	G	I	E	G	G	I	I	S	N	Q	Q
	711				720			729			738			747			756
ATC	ACA	GCT	TCC	TCT	ACT	CAC	CGA	GCT	CTT	TTT	GGA	CTC	CAA	AAA	TGG	TAT	CCC
I	T	A	S	S	T	H	R	A	L	F	G	L	Q	K	W	Y	P
	765				774			783			792			801			810
TAC	TAT	GCA	CGT	CTT	AAT	AAG	AAG	GGG	CTT	ATA	AAT	GCG	TGG	ACA	GCT	GCA	GAA
Y	Y	A	R	L	N	K	K	G	L	I	N	A	W	T	A	A	E
	819				828			837			846			855			864
AAT	GAC	AGA	TGG	AAC	CGG	TGG	ATT	CAG	ATA	AAT	TTG	CAA	AGA	AAA	ATG	AGA	GTT
N	D	R	W	N	R	W	I	Q	I	N	L	Q	R	K	M	R	V
	873				882			891			900			909			918
ACT	GGT	GTG	ATT	ACC	CAA	GGG	GCC	AAG	AGG	ATT	GGA	AGC	CCA	GAG	TAT	ATA	AAA
T	G	V	I	T	Q	G	A	K	R	I	G	S	P	E	Y	I	K
	927				936			945			954			963			972
TTC	TAC	AAA	ATT	GCC	TAC	AGT	AAT	GAT	GGA	AAG	ACT	TGG	GCA	ATG	TAC	AAA	GTG
F	Y	K	I	A	Y	S	N	D	G	K	T	W	A	M	Y	K	V
	981				990			999			1008			1017			1026
AAA	GGC	ACC	AAT	GAA	GAC	ATG	GTG	TTT	CGT	GGA	AAC	ATT	GAT	AAC	AAC	ACT	CCA
K	G	T	N	E	D	M	V	F	R	G	N	I	D	N	N	T	P
	1035				1044			1053			1062			1071			1080
TAT	GCT	AAC	TCT	TTC	ACA	CCC	CCC	ATA	AAA	GCT	CAG	TAT	GTA	AGA	CTC	TAT	CCC
Y	A	N	S	F	T	P	P	I	K	A	Q	Y	V	R	L	Y	P
	1089				1098			1107			1116			1125			1134
CAA	GTT	TGT	CGA	AGA	CAT	TGC	ACT	TTG	CGA	ATG	GAA	CTT	CTT	GGC	TGT	GAA	CTG
Q	V	C	R	R	H	C	T	L	R	M	E	L	L	G	C	E	L
	1143				1152			1161			1170			1179			1188
TCG	GGT	TGT	TCT	GAG	CCT	CTG	GGT	ATG	AAA	TCA	GGA	CAT	ATA	CAA	GAC	TAT	CAG
S	G	C	S	E	P	L	G	M	K	S	G	H	I	Q	D	Y	Q
	1197				1206			1215			1224			1233			1242
ATC	ACT	GCC	TCC	AGC	ATC	TTC	AGA	ACG	CTC	AAC	ATG	GAC	ATG	TTC	ACT	TGG	GAA
I	T	A	S	S	I	F	R	T	L	N	M	D	M	F	T	W	E
	1251				1260			1269			1278			1287			1296
CCA	AGG	AAA	GCT	CGG	CTG	GAC	AAG	CAA	GGC	AAA	GTG	AAT	GCC	TGG	ACC	TCT	GGC
P	R	K	A	R	L	D	K	Q	G	K	V	N	A	W	T	S	G

FIG. 4B



1305	1314	1323	1332	1341	1350
CAC AAT GAC	CAG TCA CAA	TGG TTA CAG	GTG GAT CTT	CTT GTT CCA	ACC AAA GTG
H N D Q	S Q W L	Q V D L	L V P T	K V	
1359	1368	1377	1386	1395	1404
ACT GGC ATC	ATT ACA CAA	GGA GCT AAA	GAT TTT GGT	CAT GTA CAG	TTT GTT GGC
T G I I	T Q G A	K D F G	H V Q F	V G	
1413	1422	1431	1440	1449	1458
TCC TAC AAA	CTG GCT TAC	AGC AAT GAT	GGA GAA CAC	TGG ACT GTA	TAC CAG GAT
S Y K L	A Y S N	D G E H	W T V Y	Q D	
1467	1476	1485	1494	1503	1512
GAA AAG CAA	AGA AAA GAT	AAG GTT TTC	CAG GGA AAT	TTT GAC AAT	GAC ACT CAC
E K Q R	K D K V	F Q G N	F D N D	T H	
1521	1530	1539	1548	1557	1566
AGA AAA AAT	GTC ATC GAC	CCT CCC ATC	TAT GCA CGA	CAC ATA AGA	ATC CTT CCT
R K N V	I D P P	I Y A R	H I R I	L P	
1575	1584	1593	1602	1611	1620
TGG TCC TGG	TAC GGG AGG	ATC ACA TTG	GCG TCA GAG	CTG CTG GGC	TGC ACA GAG
W S W Y	G R I T	L A S E	L L G C	T E	
1629	1638	1647	1656	1665	1674
GAG GAA TGA	GGG GAG GCT	ACA TTT CAC	AAC CGT CTT	CCC TAT TTG	GGT AAA AGT
E E *	G E A T	F H N R	L P Y L	G K S	
1683	1692	1701	1710	1719	1728
ATC TCC ATG	GAA TGA ACT	GTG TAA AAT	CTG TAG GAA	ACT GAA TGG	TTT TTT TTT
I S M E	* T V *	N L *	E T E W	F F F	
1737	1746	1755	1764	1773	
TTT TCA TGA	AAA AGT GGT	CAA ATT ATG	GTA GGC AAC	TAA CGG TGT	TTT TAC C 3'
F S *	K S G Q	I M V G	N * R	C F Y	

FIG. 4C



10	20	30	40	50	60
GACAGATGGC	CATGGATTCA	GATAAATTTG	CAAAGAAAAA	TGAGAGTCAC	TGGTGTTATT
70	80	90	100	110	120
ACCCAAGGAG	CAAAAAGGAT	TGGAAGCCCA	GAGTACATAA	AATCCTACAA	AATTGCCTAC
130	140	150	160	170	180
AGCAATGACG	GGAAGACCTG	GGCAATGTAC	AAAGTAAAAG	GCACCAATGA	AGAGATGGTC
190	200	210	220	230	240
TTTCGTGGAA	ATGTTGATAA	CAACACACCA	TATGCTAATT	CTTTCACACC	CCCAATCAAA
250	260	270	280	290	300
GCTCAGTATG	TAAGACTCTA	CCCCCAAATT	TGTCGAAGGC	ATTGTACTTT	AAGAATGGAA
310	320	330	340	350	360
CTTCTTGGCT	GTGAGCTC..	.....	.....	.....	.....

FIG. 5

m-del-1	MKHLVAAWLLVGLSLGVPQFGKQ	egf-1	150
h-del-1	RS V	D P VG	
m-del-1	PEGFAGPNCSSVVEASDEEKPTSAGPCIPN	egf-2	100
h-del-1	D TD E T	egf-3	
m-del-1	IGYVCKCPRGFNGIHCOHNINECEAEPCRN		150
h-del-1	V K		
m-del-1	GRNCQYKCSGHLGIEGGIISNOQITASSNHRALFGLQKWYPYARLNKKG		200
h-del-1	P T	discoidin-1	
m-del-1	LINAWTAAENDRWP-WIQ		249
h-del-1	NR +VTVG = "minor" F		250
m-del-1	YSNDGKTWAMYKVKGTEEMVFRGNVDNNTPYANSFTPP		299
h-del-1	D I		300
m-del-1	ICRRHCTLRMELLGCELSGCSEPLGMKSGHIQDYQITASSVFRTLNDMF		349
h-del-1	V discoidin-2 I		350
m-del-1	TWEPRKARLDKQGVNAWTSQHNDQSQLQVDLLVP		399
h-del-1	T X X		400
m-del-1	GHVQFVGSYKLAYSNDGEHWMVHQDEKQKDKVFQGNFNDTHRKNVIDP		449
h-del-1	T X X		450
m-del-1	PIYARFIRILPWSWYGRITLRSELLGCAEEE		480
h-del-1	H A T		481

FIG. 6

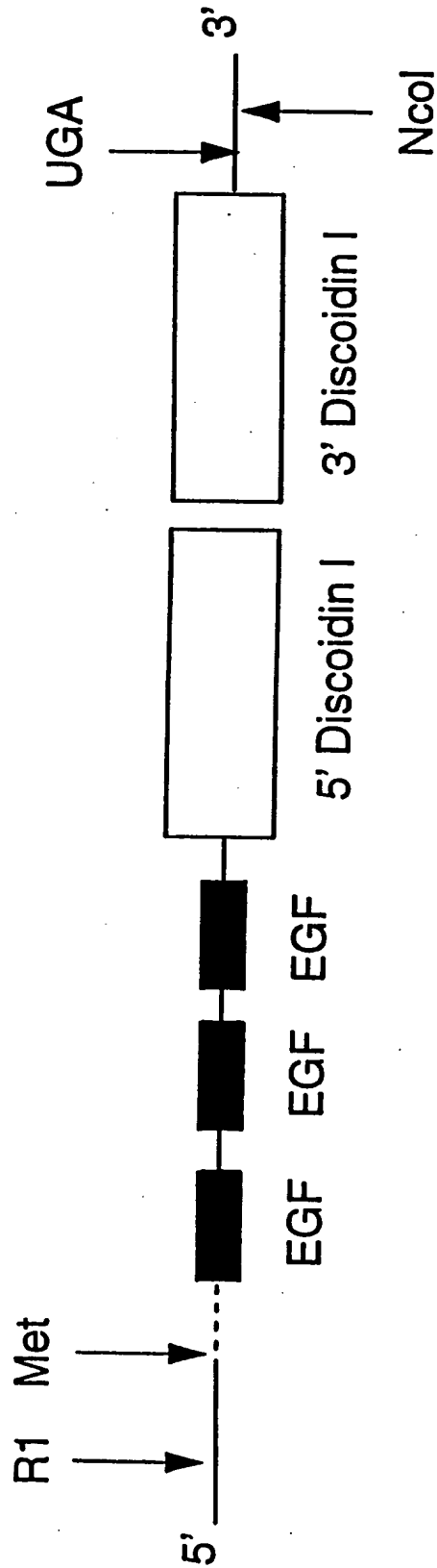


FIG. 7

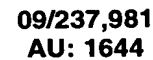


FIG. 8



M K R S V A V W L L V G L S L G V P O F G K G D I ...

FIG. 9

- 1) CDPNPCENGGICLPGLAVG-----SFSCECPDGFTDPNCS SVVEVASDEEEPTSAGP
- 2) CTPNPCHNGGTCEISEAYRGDTFIGYVCKCPRGFNGIHCO HNINE
- 3) CEVEPCKNGGICTDLVA-----NYSCECPGEFMGRNCQ YK

CONSENSUS C---PC-NGG-C-----Y-C-C--GY-G--C-
EGF DOMAIN F F

FIG. 10

	9					18			27			36			45			54	
5'	-GT	GAT	ATT	TGT	GAT	CCC	AAT	CCA	TGT	GAA	AAT	GGA	GGT	ATC	TGT	TTG	CCA	GGA	
	X	D	I	C	D	P	N	P	C	E	N	G	G	I	C	L	P	G	
			63			72			81			90			99			108	
	TTG	GCT	GTA	GGT	TCC	TTT	TCC	TGT	GAG	TGT	CCA	GAT	GGC	TTC	ACA	GAC	CCC	AAC	
	L	A	V	G	S	F	S	C	E	C	P	D	G	F	T	D	P	N	
			117			126			135			144			153			162	
	TGT	TCT	AGT	GTT	GTG	GAG	GTT	GGT	CCC	TGC	ACT	CCT	AAT	CCA	TGC	CAT	AAT	GGA	
	C	S	S	V	V	E	V	G	P	C	T	P	N	P	C	H	N	G	
			171			180			189			198			207			216	
	GGA	ACC	TGT	GAA	ATA	AGT	GAA	GCA	TAC	CGA	GGG	GAT	ACA	TTC	ATA	GGC	TAT	GTT	
	G	T	C	E	I	S	E	A	Y	R	G	D	T	F	I	G	Y	V	
			225			234			243			252			216			270	
	TGT	AAA	TGT	CCC	CGA	GGA	TTT	AAT	GGG	ATT	CAC	TGT	CAG	CAC	AAC	ATA	AAT	GAA	
	C	K	C	P	R	G	F	N	G	I	H	C	Q	H	N	I	N	E	
			279			288			297			306							
	TGC	GAA	GTT	GAG	CCT	TGC	AAA	AAT	GGT	GGA	ATA	TGT	ACA	G	3'				
	C	E	V	E	P	C	K	N	G	G	I	C	T						

FIG. 11

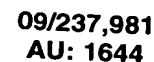


FIG. 12A



BspMI

AACTGCTCTA GTGTTGTGGA GGTTCATCA GATGAAGAAA AGCCTACTTC AGCAGGTCCC 780
N C S S V V E V A S D E E K P T S A G P

TGCATCCCTA ACCCATGCCA TAACGGAGGA ACCTGTGAGA TAACGGAAGC CTATCGAGGA 840
C I P N P C H N G G T C E I S E A Y R G

GACACATTCA TAGGCTATGT TTGTAAATGT CCTCGGGGAT TTAATGGGAT TCACTGTCAG 900
D T F I G Y V C K C P R G F N G I H C Q

CACAATATAA ATGAATGTGA AGCTGAGCCT TGCAGAAATG GCGGAATATG TACCGACCTT 960
H N I N E C E A E P C R N G G I C T D L

BsmI

GTTGCTAACT ACTCTTGTA ATGCCCAGGA GAATTTATGG GACGAAATTG TCAATATAAA 1020
V A N Y S C E C P G E F M G R N C Q Y K

TGCTCTGGGC ACTTGGAAT CGAAGGTGGG ATCATATCTA ATCAGCAAAT CACAGCTTCA 1080
C S G H L G I E G G I I S N Q Q I T A S

SacI
Ecl136II

TCTAATCACC GAGCTCTTTT TGGACTCCAG AAGTGGTATC CCTACTATGC TAGACTTAAT 1140
S N H R A L F G L Q K W Y P Y Y A R L N

NcoI
MscI
BclI

PvuII

AAGAAGGCC TTATAAATGC CTGGACAGCT GCTGAAAATG ACAGATGGCC ATGGATTACAG 1200
K K G L I N A W T A A E N D R W P W I Q

GTAACAGTGG GATGAGACAA ATCCATTTC CAAATTATCA GAATCATTAT AGAAGTAGGT 1260
V T V G

TAGGGAGAAT TGGCTGTGAT TCTTTCTCAT GGTAAAAATG TGATTTAGTT CAGAATTAAC 1320

FIG.12B



ATGGTTGGAA ACTCTAAAA ATGTGAAAA CAGGAACATT CTATGTCTGA AAATCTGAAA 1380

ATAGCATCAA GATGAAAACA TTCTTTAGTC ATAAATATAC TCTTTTAAGT TATAGTAGAG 1440

BglII

AAAAGATCT TATCATTTCA TAAGTGGACT TTTGGGATAG CATTGGAAT GTAAATGAAA 1500

SspI

TAAATACCTA ATTGAAAAA GTTTATTCTA AAGTGTAAT ATTTAGCAAC AGATTCAGAG 1560

ACAAGAAAGT AACAATTCAA TCTGTGTATT TTTGTGAGA AATAGTTTCC CATGTGCAAA 1620

FspI

BspHI

PstI

TATAAAGTGC GCATCATATC ATGATAATAT CCAACTGTCT GCAGAACTCC CTTTCATAAA 1680

TGAGAGAATT TTAATTCATA GTGCCTTATA TCCTCATCAG CCATCTGACT TTAACACAGA 1740

NsiI

AGAAAACAAT GAAATGATGC ATTAAGTGCT TTGCTAGAAG AAACATCATA GCAAAGCTGA 1800

XhoI

HindIII

PaeR7I

TAGCCACAT TCTGTGCANN NAAGCTTCCA GAGCACTCGA GAAAAGCAG AAATGAGATG 1860

BclI

TTTTATGAAA ACCGAAAAGA TAATCTGATT TCTGTGAAAT ATACTTTTGA TCATGTGGTT 1920

CTTTAAGATA GTCACAAACA AGTCATTAGT AGCAGATACC AAATGGGAGA AAATTTCCAG 1980

Bst1107I

TAACTGAGG GTCAAGCCAG TCATGCTGAA ACTACATGAG GTCAGGAAAG TTTTGAAATA 2040

FIG.12C



AGGTGATTTT GGAAGGATAC CTTCAACTGG CCTAGATTTT CAAGAAACAG TGTAATCAAC 2100

AGCCAAACAT GAGAATCTAG CTAACAGCAT TTAGAAAACC AGAACTAAGA GTGTTACTGG 2160

DraI

GGAATTGCAT TTAAATCCAG TATGAGAGTT TGCAAATGCC GTATTCTTCT AAGGGGTTTG 2220

NcoI

TGCCACATTT TGTTACCATG GAGTCCTCTG TAAGAACTTT ATTAGATAAA TCATCTTTAC 2280

EcoRI

ACTATAATTT GAATAAAAGC CGGAATTC

2308

FIG.12D



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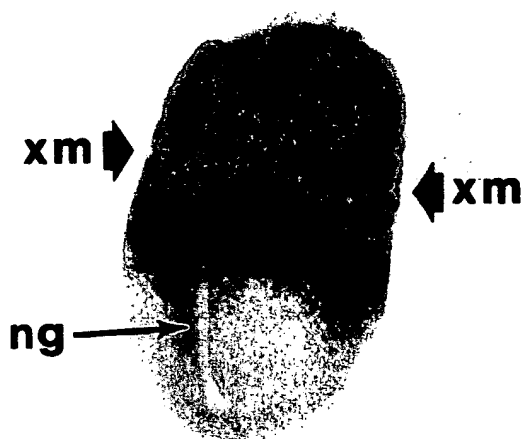


FIG.13A



FIG.13B

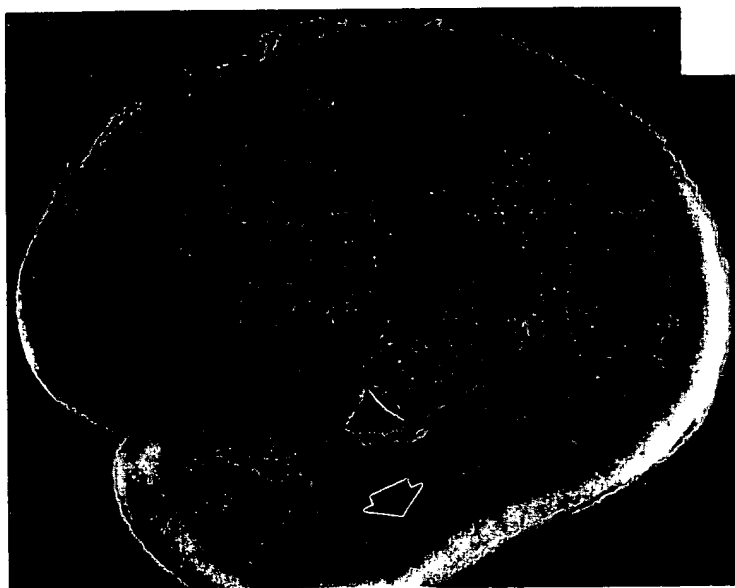


FIG. 13C

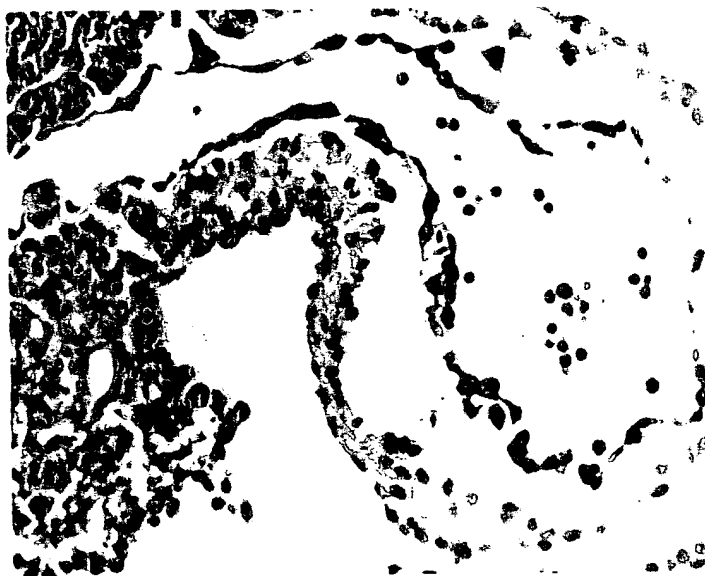


FIG. 13D

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052704

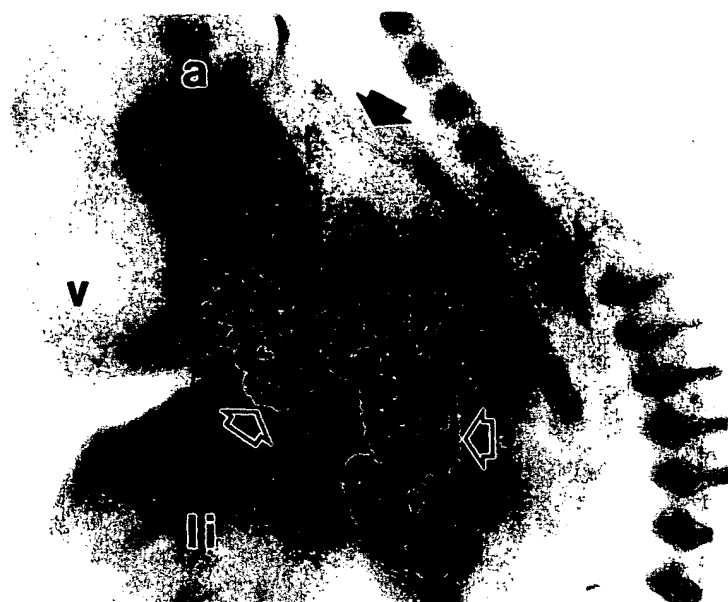


FIG. 13E

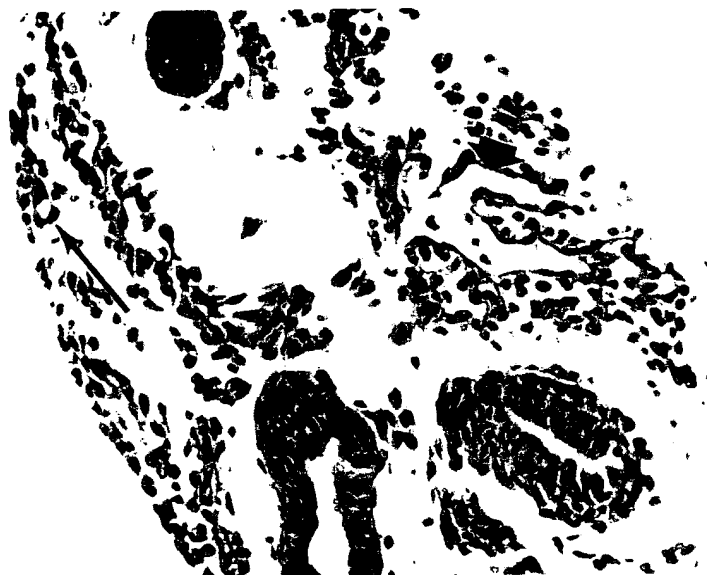


FIG. 13F



FIG.13G

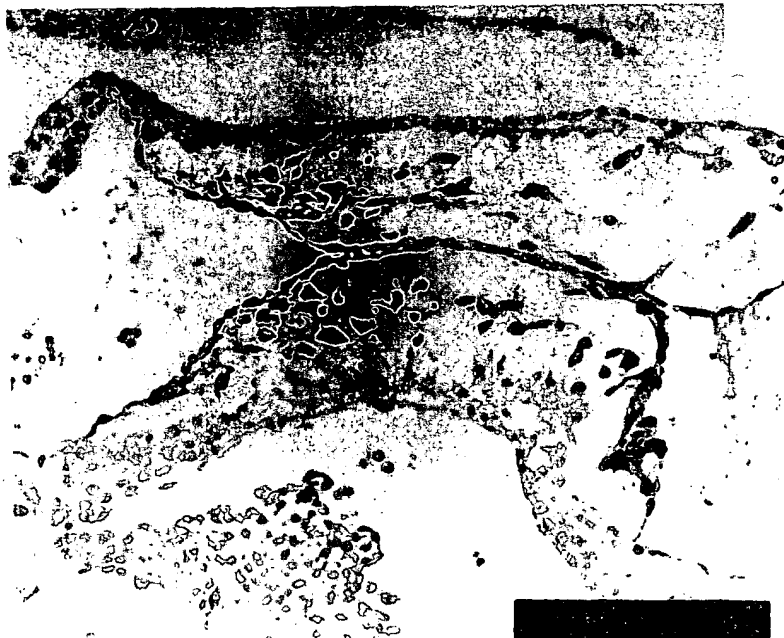


FIG.13H

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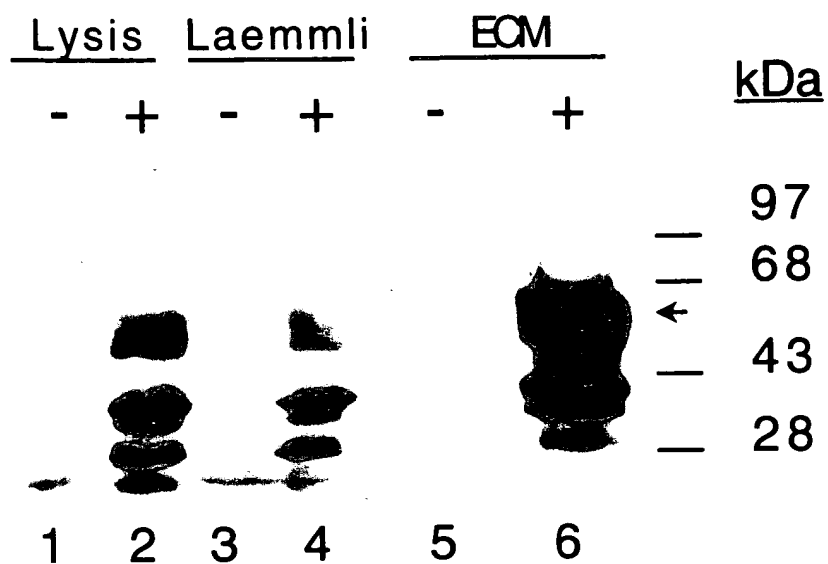


FIG.14A

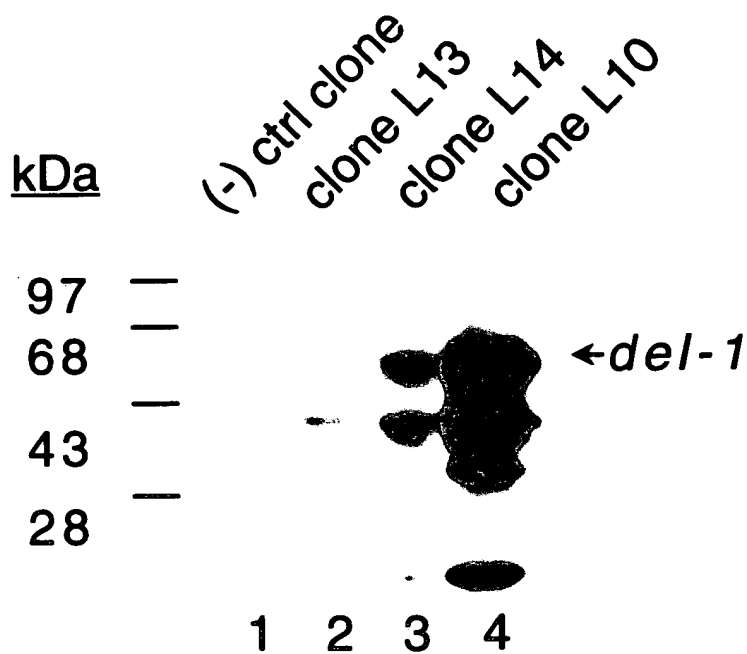


FIG.14B



FIG.15A

FIG.15B

FIG. 16



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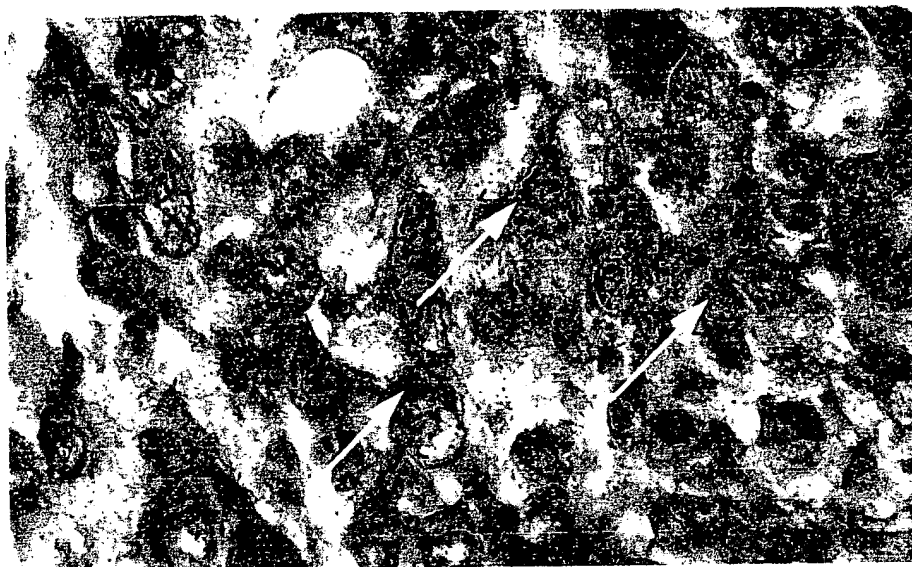


FIG.17A

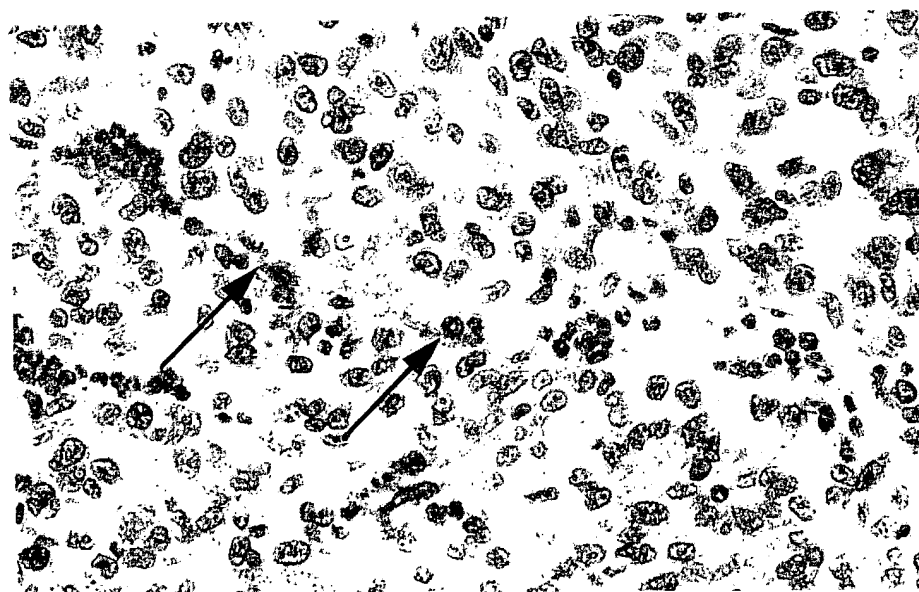


FIG.17B

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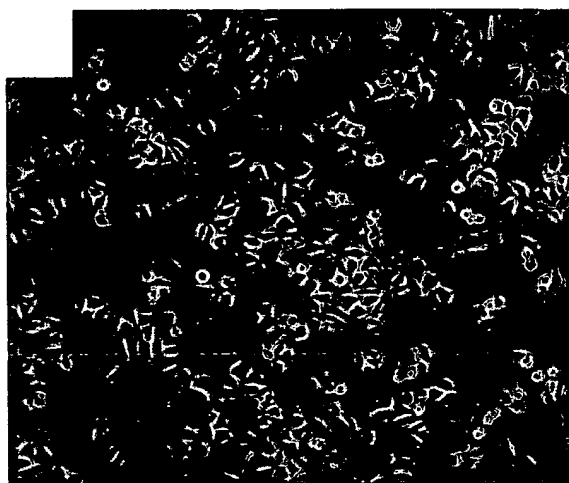


FIG.18A



FIG.18B

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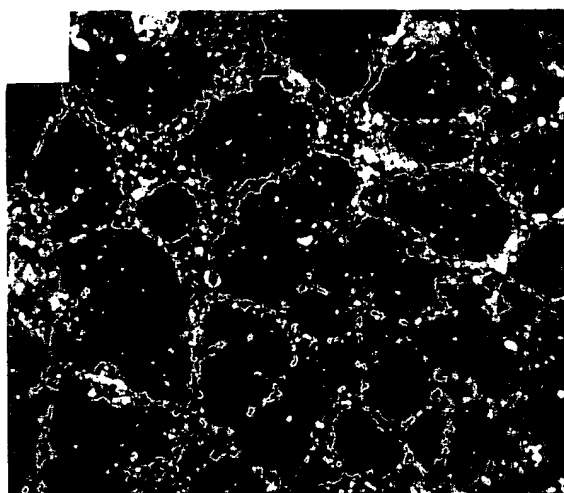


FIG.18C

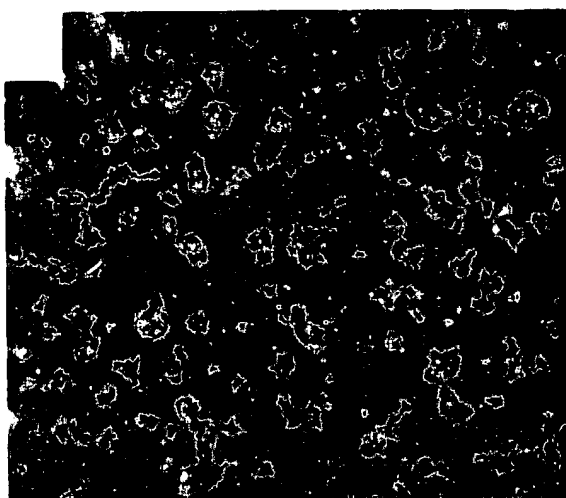


FIG.18D

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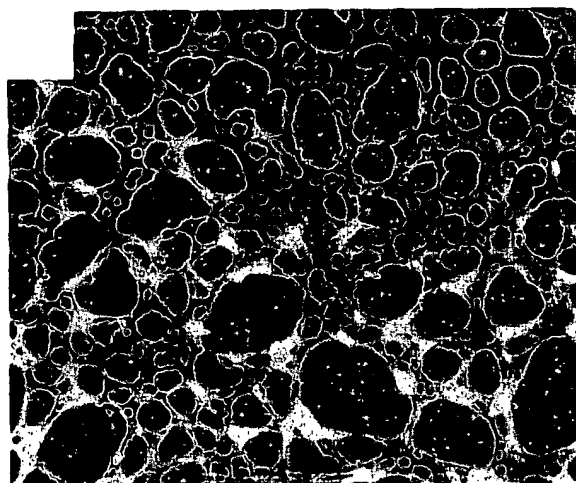


FIG.18E

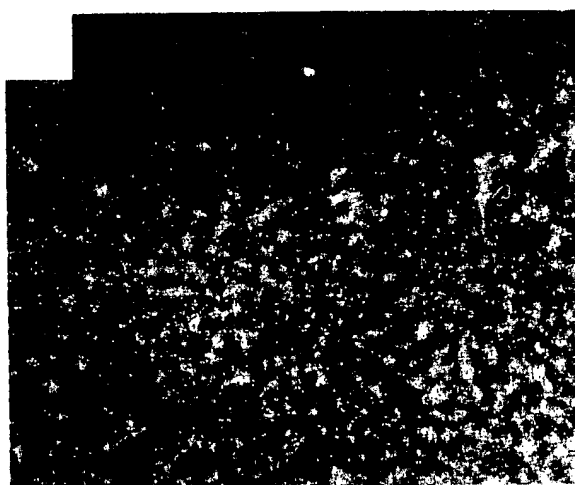


FIG.18F

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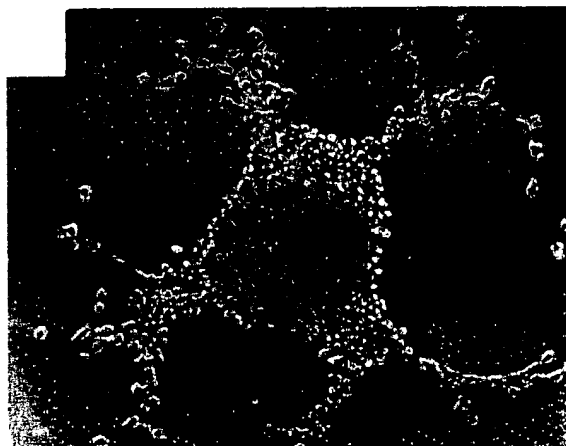


FIG. 18G

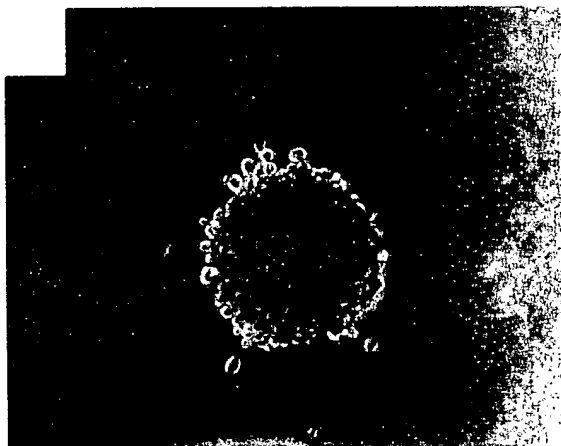


FIG. 18H

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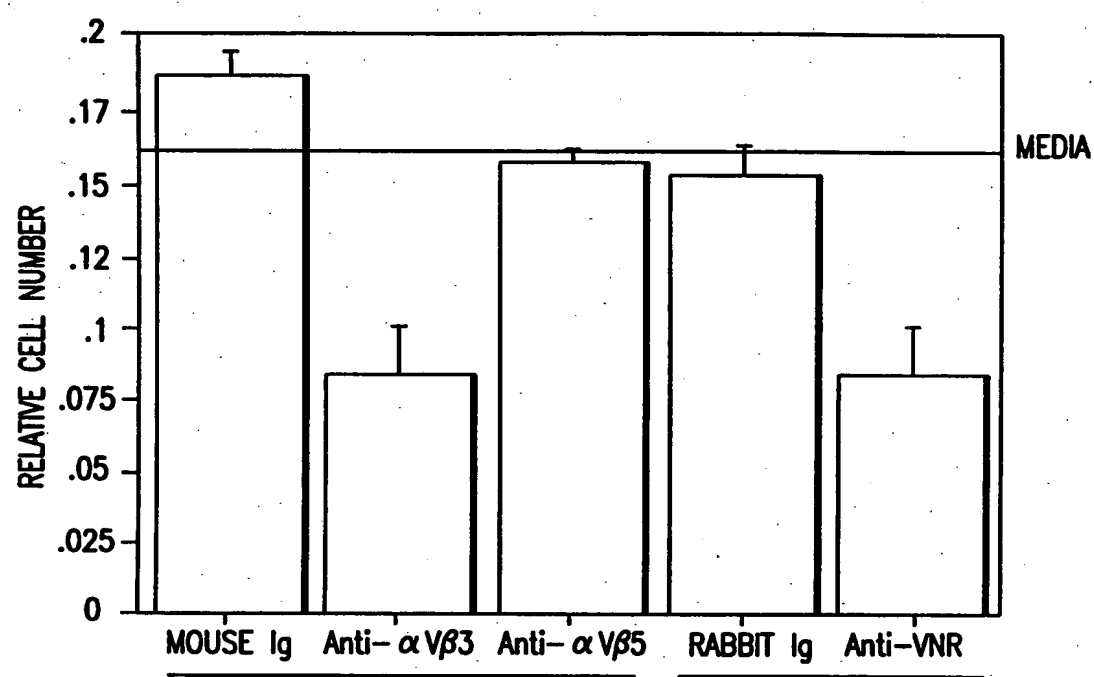


FIG.19

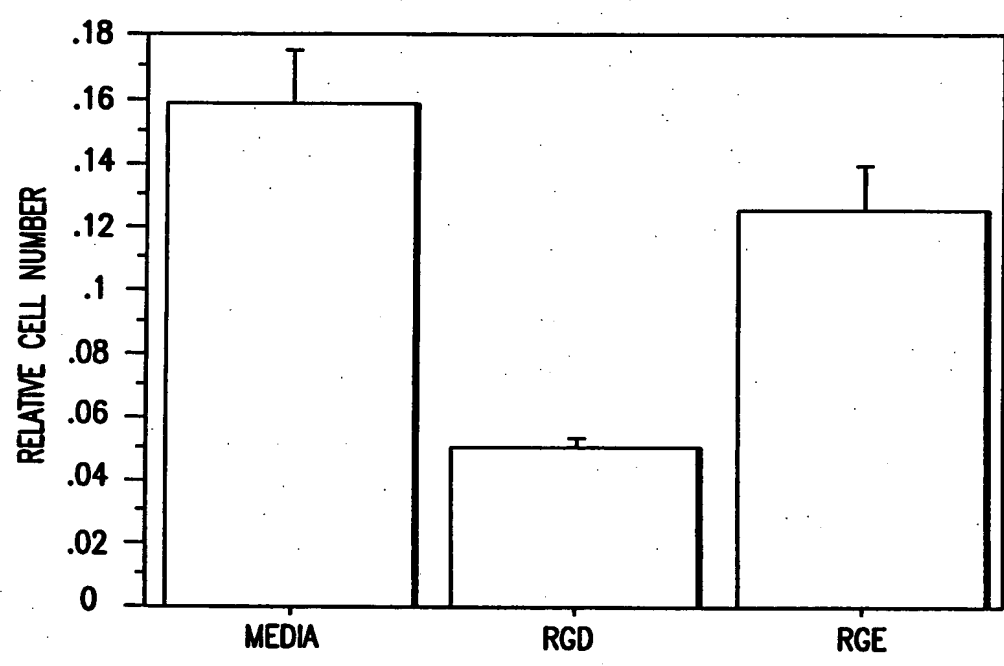


FIG.20

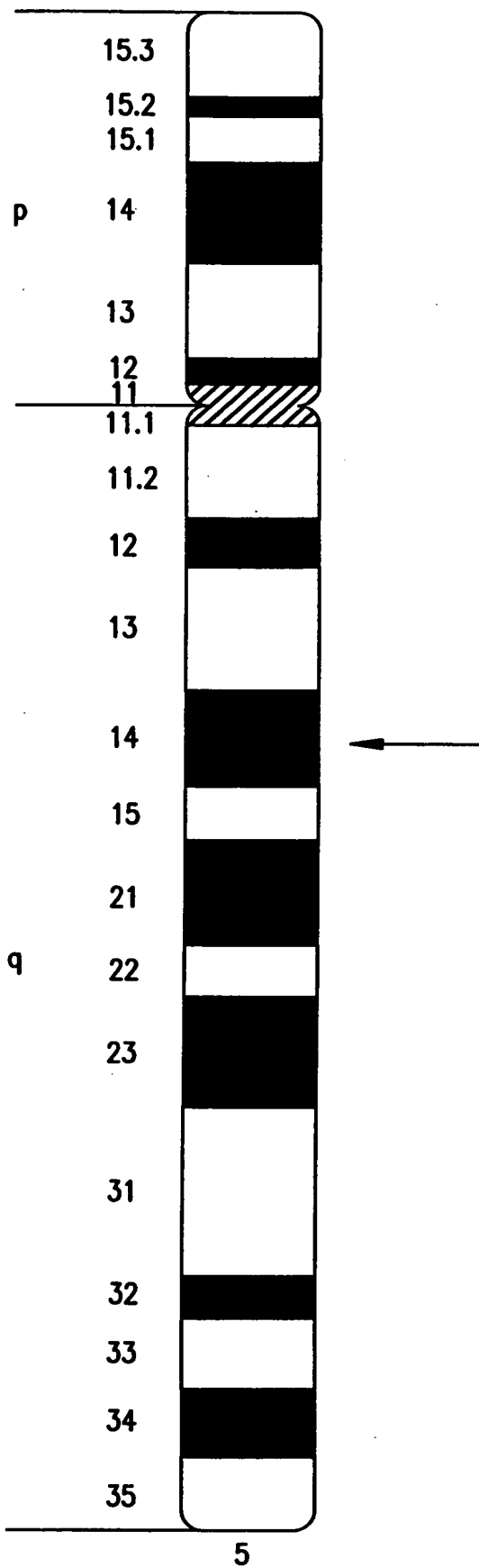


FIG.21A

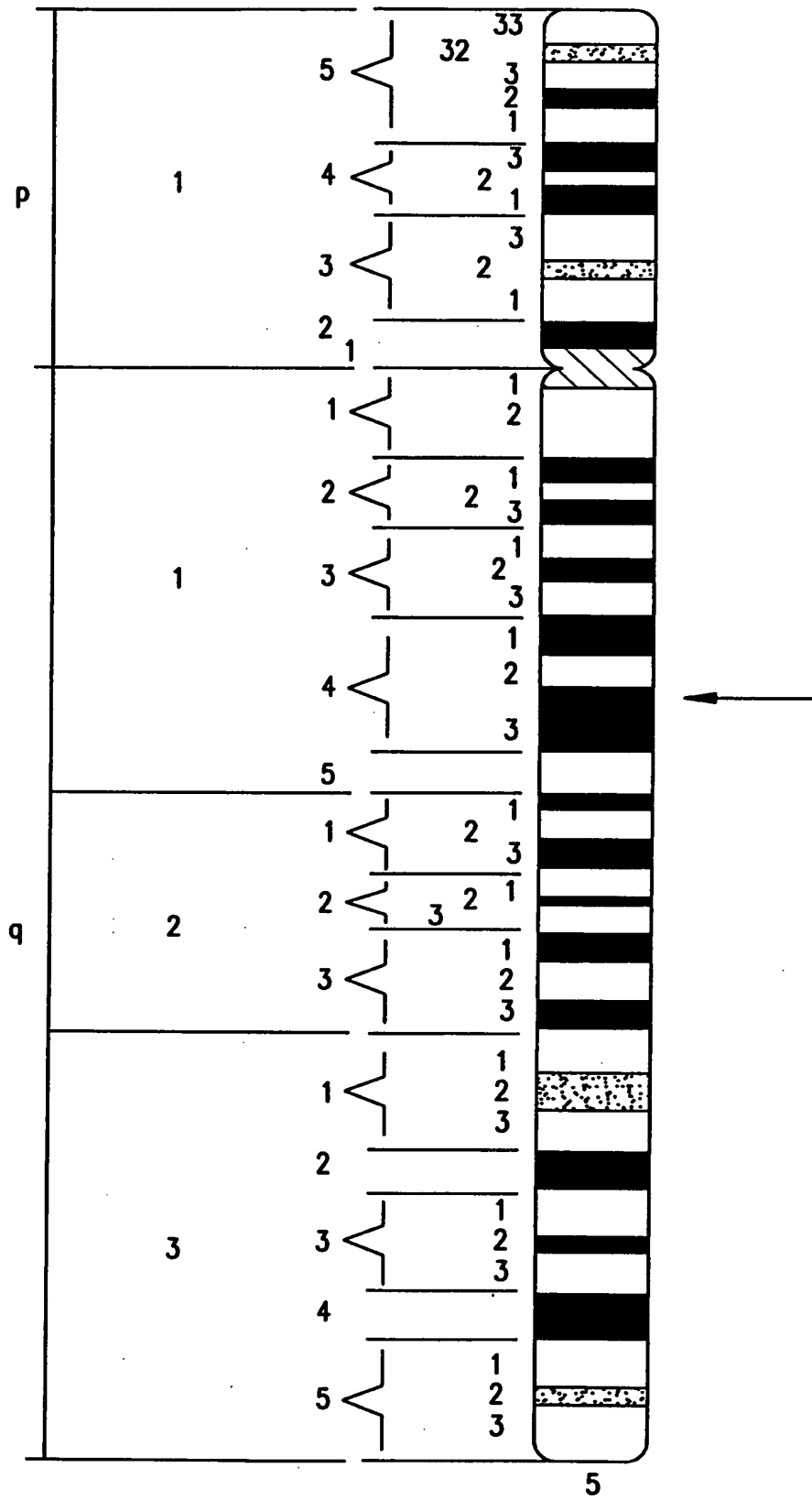


FIG. 21B